

# RED BRIDGE CAMPBELL TOWN

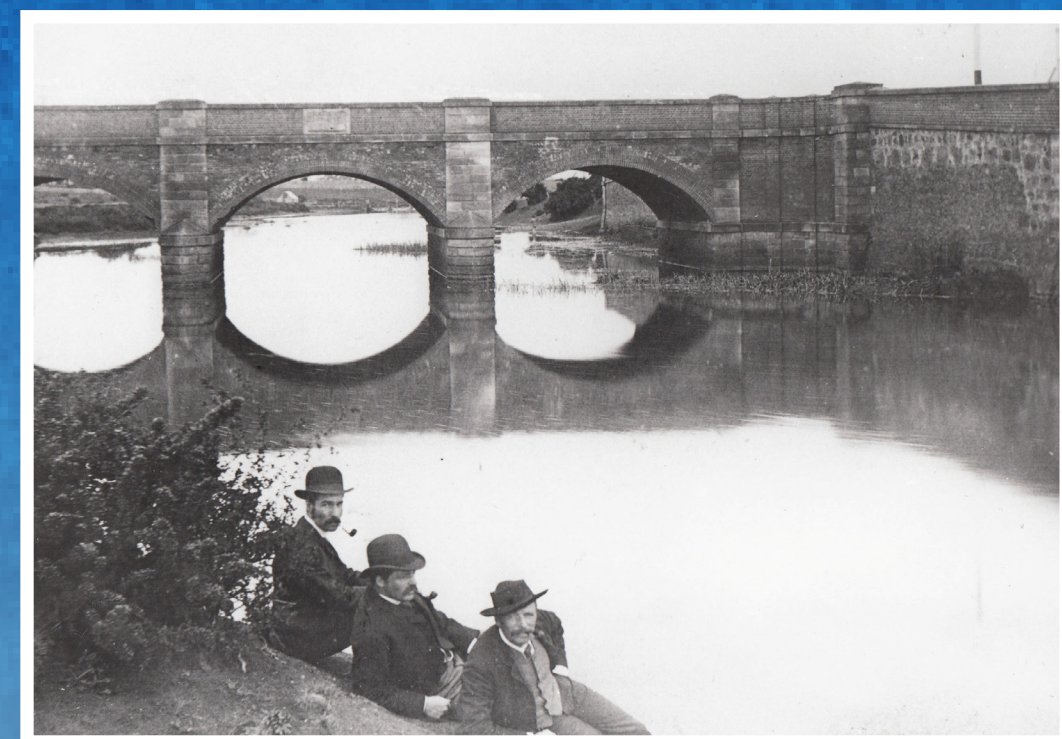
EST. 1838

## WHY IS IT IMPORTANT?

The construction of Red Bridge resulted from Lieutenant-Governor George Arthur's emphasis on road and bridge construction in the colony of Van Diemen's Land.

Red Bridge, carrying the Midland Highway over the Elizabeth River, was completed in 1838, and has been in continuous use since then. It is one of the oldest surviving bridges in Australia, is the oldest brick bridge and is the oldest bridge on the National Highway network.

This bridge replaced an earlier flood-prone earth and log causeway located some 200m downstream.



Courtesy Tasmanian Archives & Heritage Office

3 men on the bank c1900s

## WHO PLANNED IT?

Captain Alexander Cheyne, Director-General of Roads and Bridges, chose the site for the bridge. His plan was to cross the Elizabeth River flood plain with a causeway above flood level, site the bridge so that it could be mostly constructed in the dry and then divert the river through the bridge into a new downstream canal, bypassing the southern loop in the original river course.

There are no extant original drawings, but the designer of the bridge itself is believed to be renowned convict architect and engineer James Blackburn. The design shows great attention to aesthetic and architectural details.



Courtesy G. Nichols

South east training wall

Red Bridge is an arch structure with three spans, each approximately 7.6m between springing points. The overall length is about 35m, and the width between parapets is about 8.5m.

The arches are each formed by three rings of bricks, and are sprung from piers of ashlar-faced sandstone. The spandrel walls and bridge parapets above are constructed in brick, with a sandstone string course between, and sandstone parapet copings.

The river training walls are a feature of the bridge. They are about 39m long and extend upstream and downstream from each end of the bridge. They are constructed of basalt, with brick parapets and sandstone pillars, string courses and copings.



Courtesy G. Nichols

View of Red Bridge from downstream

## WHO BUILT IT?

The construction supervisor on site was Captain Frederick Forth, who later succeeded Cheyne as Director-General of Roads and Bridges. The work was carried out by convict labour, chosen, where possible, to include the more willing and skilled workers. At its peak, the project employed 220 men including five teams of brickmakers and a stone cutter.



Courtesy G. Nichols

View of arch showing details of brickwork

## CONSTRUCTION

The distinctive red bricks, which gave rise to the bridge name, were manufactured on site, using clay from nearby. An estimated 1.5 million bricks were laid in the structure and the training walls.

For the bridge parapet, darker over-fired bricks were used for the headers to give a distinctive checkerboard pattern as an architectural feature.



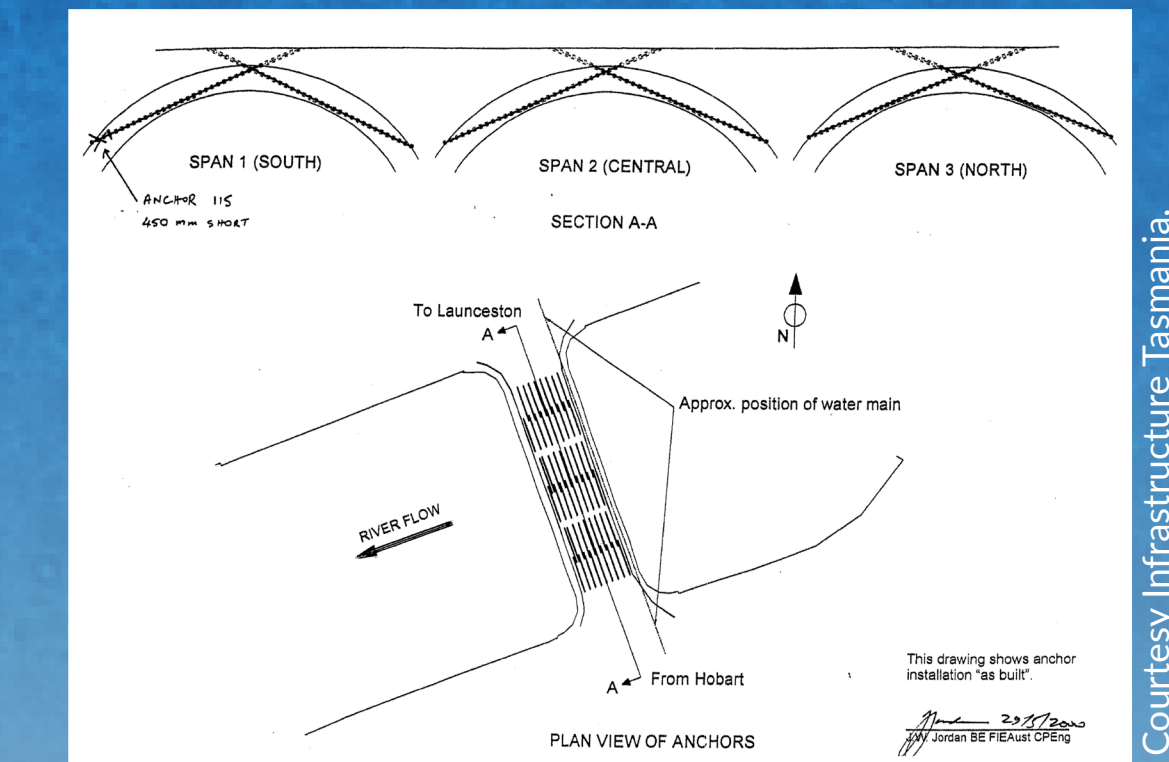
Courtesy G. Nichols

Northern side of southern arch, re-pointing, mortar loss and leaching prior to restoration in 2000 – G. Nichols

## STRENGTHENING

Following concerns about the arch deflections occurring under heavy trucks, and the associated loss of mortar, one arch was load tested and analysed in 1994. The results led to a Conservation Plan being prepared, and funding obtained for bridge strengthening and rehabilitation works. These works were then carried out in 2000.

The arches were strengthened internally using the Cintec Archtec system, to carry current design truck loading. This involved the installation of grouted stainless steel reinforcement bars in each brick arch, tangential to the curve. All the lost mortar in the arches was restored.



Courtesy Infrastructure Tasmania, Department of State Growth

Layout of Cintec anchors



Engineering Heritage  
National Marker placed on  
9 November 2017  
Engineers Australia Tasmania Division  
Red Bridge, Campbell Town

For more information  
about this project,  
please scan:

